



Permit
IDG130025
WAG

NOI

**Notice of Intent to be Covered Under EPA's NPDES Permit
for Federal Aquaculture Facilities and Aquaculture
Facilities Located in Indian Country within the Boundaries
of the State of Washington**

General Permit WAG130000

***In addition to the requirements in the following pages, a
complete application must also include the following:***

- ☐ 1) An area map showing regional context
- ☐ 2) A sketch, aerial photograph, or map of the existing or proposed facility with the following clearly marked (include scale):
 - ☐ Approximate overall dimensions of the facility
 - ☐ All raceways and rearing ponds
 - ☐ All water sources and water flow rates
 - ☐ Any settling ponds, including dimensions and volume
 - ☐ All discharge points and receiving waters
 - ☐ All water flow paths
 - ☐ Sludge disposal areas
 - ☐ Water conditioning units
 - ☐ Water treatment units (such as off-line settling basins)
 - ☐ Holding tanks
 - ☐ Locations where flows are measured
 - ☐ Points of chemical and therapeutic drug addition
 - ☐ Points of feed addition
 - ☐ Painted or caulked surfaces in contact with water
- ☐ 3) A sketch, aerial photograph, or map of all satellite facilities that are part of your hatchery program, in relation to the facility for which you are seeking NPDES permit coverage
- ☐ 4) A map to accompany driving directions to the facility (if address is not posted or visible on-site)
- ☐ 5) A completed signature page

USEPA REG



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Notice of Intent

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

Permit Number for your facility (if already enrolled in this permit): WAG130026
Other permit number(s), date, and Issuing agency:

Section 1. Owner/Operator Information

Owner Name: Tacoma Power	Title:
Phone:	Fax:
Email:	

Owner Mailing Address

Line 1: 3628 South 35th Street		
Line 2:		
City: Tacoma	State: WA	Zip: 98409

Operator Information

Owner Name: Andrew Ollenburg	Title: Cushman Fish Facilities Manager
Phone: 253-441-4950	Fax:
Email: aollenburg@cityoftacoma.org	

Operator Mailing Address

Line 1: PO Box 1610		
Line 2:		
City: Hoodspport	State: WA	Zip: 98548

Section 2. Facility Information

Facility Name: Saltwater Park Sockeye Hatchery	
Tribal or Federal Facility? <input type="checkbox"/> Tribal <input type="checkbox"/> Federal <input checked="" type="checkbox"/> Other <u>City of Tacoma-Tacoma Public Utilit</u>	
Is the facility located in Indian Country? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Notes:	

Facility Mailing Address

Line 1: PO Box 1610		
Line 2:		
City: Hoodspport	State: WA	Zip: 98548

Facility Physical Address

Line 1: 21452 N U.S. HWY 101		
Line 2:		
City: Shelton	State: WA	Zip: 98584
County/Reservation: Mason County		

Please provide driving directions to the facility from the nearest town or city. Attach a separate page if needed. Include a map to accompany these directions if the address is not posted or visible on-site.

Head south out of Hoodspport on HWY 101 for 2.9 miles. Facility is on the east side (water side) of the highway, adjacent to the Skokomish boat launch and parking lot.

Is there a locked gate or barrier that prevents access via car to the facility? ☒ Yes ☐ No

Notes: Gates are unlocked during business hours.

Section 2. Facility Information (cont'd)

Is this an existing facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Date of first discharge: January, 2017
Is this a planned/proposed facility? <input type="checkbox"/> Yes <input type="checkbox"/> No		
If yes, estimated construction start date:		Estimated construction end date:
Date(s) facility remodeled, expanded, or upgraded (MM/DD/YYYY):		
Have there been any changes or additions to the facility that will increase it to more than 100,000 lbs of annual production since the last permit application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe:		
Are there any planned remodels, additions, or expansions that will increase annual production to over 100,000 lbs during the next 5 years? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe:		

Section 2. Facility Information (cont'd) Satellite Facilities

Please describe any satellite facilities that operate in tandem with the NPDES-permitted facility as part of the hatchery program. This may include off-site acclimation ponds, net pens, other hatcheries that fish are transported to or from, facilities from which eggs are delivered, etc.

Attach a sketch, aerial photograph, or map to show where any satellite facilities are located in relation to the facility for which you are seeking NPDES coverage in this application.

Submit additional pages as necessary to cover all additional facilities.

Label additional pages: Satellite Facilities/Hatchery Program

Name of facility:
Describe the function of satellite facility and how it relates to the facility for which this NOI is requesting NPDES coverage. Include the species raised and life stage for each facility that is part of the hatchery program.

Satellite Facility Physical Address

Line 1:		
Line 2:		
City:	State:	Zip:
County/Reservation:		

Satellite Facility Operator Information

Agency/Tribe/Entity:	Name of Facility Manager:
Phone:	
Email:	

Satellite Facility Operator Mailing Address

Line 1:		
Line 2:		
City:	State:	Zip:

Section 3. Operations and Production

Is the production system best described as:

☒ Flow through ☐ Recirculating ☐ Pond system ☐ Other _____

Does the facility operate year-round? ☒ Yes ☐ No

If not, please indicate which months the facility holds fish or eggs:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

List the species grown or held at your facility and estimate the annual production of each in gross harvestable weight. If fish are released rather than harvested, list the estimated weight at time of release. The estimate can be a range over the next 5 years, if appropriate.

Species	Fish Produced	Receiving Water to which Fish are Released	Month Released/Spawned
Sockeye Salmon	4,167	Lake Cushman	May
Sockeye Salmon	3,333	North Fork Skokomish River	May
Sockeye Salmon	5,555	Lake Cushman	September

Fill in the table below with the highest production numbers expected for the next 5 years. List the maximum amount of fish on-site and the maximum amount of food **per month** for the year of maximum production. For **new facilities**, provide information for the year of highest anticipated production within the next 5 years.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	3,150	500	July	4,500	1,100
February	3,700	600	August	6,900	1,700
March	4,000	700	September	2,225	1,050
April	2,800	800	October	3,000	700
May	3,600	1,500	November	3,625	750
June	3,300	850	December	4,650	950

From what year are these data? 2017, 2018

Note: If you operate for 30 or more days per year and exceed the production (20,000 lbs) and feed thresholds (5,000 lbs of food during the month of maximum feeding) for even a brief period of time, your facility is required to apply for NPDES permit coverage.

Section 3. Operations and Production (cont'd)

Does this facility process fish for market at this location? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Are fish spawned on-site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No During which months are fish spawned on-site? October, November	
Describe wastes generated as a result of on-site spawning (e.g., blood, anesthetics, disinfectants, carcasses): Blood, fish ovarian fluid, iodine.	
Describe how spawning wastes are disposed of and to which outfall (if any): All waste generated as a result of on-site spawning is collected and disposed of in an approved upland disposal facility (landfill). Spawning operations are not expected to begin until 2020.	

Provide the percentage of fish released from the facility <u>directly</u> to a lake, river, or other location.		
<input type="checkbox"/> Lake ____ %	<input type="checkbox"/> River ____ %	<input type="checkbox"/> Other ____ %
Approximate lbs fish:	Approximate lbs fish:	Approximate lbs fish:
Location/Receiving water name:	Location/Receiving water name:	Location/Receiving water name:
Provide the percentage of fish <u>hailed off-site</u> to a lake, river, or other location.		
<input checked="" type="checkbox"/> Lake <u>90</u> %	<input checked="" type="checkbox"/> River <u>10</u> %	<input type="checkbox"/> Other ____ %
Approximate lbs fish: 9,722	Approximate lbs fish: 3,333	Approximate lbs fish:
Location/Receiving water name: Lake Cushman	Location/Receiving water name: North Fork Skokomish River	Location/Receiving water name:

Are fish held on-site for broodstock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Describe the species, where obtained, quantity, and where held (i.e., raceway or pond): Sockeye Salmon will be collected at the base of the No.2 Cushman Dam (North Fork Skokomish River). Starting in 2020, up to 2,000 adults will be held in the adult holding tanks at the Saltwater Park Sockeye Hatchery.

Section 4. Source Waters (Intakes)

Describe the facility's water sources. Attach additional pages as necessary.

Source No. 1	Source Water Name:	Max Flow	Min Flow	Avg Flow	Units (cfs or gpm)
	Groundwater	5.6	1.5	3	cfs
Source Water Treatment: none					
Are solids removed from influent water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe:					
Source No. 2	Source Water Name:	Max Flow	Min Flow	Avg Flow	Units (cfs or gpm)
	Surface water from Lake Kokanee	7	0	3	cfs
Source Water Treatment: none					
Are solids removed from influent water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe:					
Source No. 3	Source Water Name:	Max Flow	Min Flow	Avg Flow	Units (cfs or gpm)
Source Water Treatment:					
Are solids removed from influent water? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe:					
Source No. 4	Source Water Name:	Max Flow	Min Flow	Avg Flow	Units (cfs or gpm)
Source Water Treatment:					
Are solids removed from influent water? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe:					
Source No. 5	Source Water Name:	Max Flow	Min Flow	Avg Flow	Units (cfs or gpm)
Source Water Treatment:					
Are solids removed from influent water? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe:					

Section 5. Receiving Waters

Do the receiving waters primarily consist of: ☐ Fresh water ☒ Salt/Brackish water ☐ Other (Describe below)

Notes:

- Indicate if a receiving water is listed as impaired, in accordance with Section 303(d) of the Clean Water Act.
- Indicate the pollutants for which the water body is impaired and any wasteload allocations that have been assigned to the facility.
- Indicate if the discharge is to waters in Indian Country located within one mile upstream of a waterbody listed as impaired.
- Refer to the 303(d) list of impaired waters at <http://www.ecy.wa.gov/programs/Wq/303d/index.html>.
- If there is an applicable Total Maximum Daily Load (TMDL) with a Wasteload Allocation assigned to the facility, include that information here.

Receiving Water			
Receiving Water	Pollutant for which impaired	Wasteload Allocations	TMDL document the WLA
Hood Canal	N/A	N/A	

Additional Notes:

The discharge is located on the Skokomish Indian Reservation and is within one mile of candidate impaired waters as defined by the State of Washington Department of Ecology's 303 (d) program. Those pollutants include dissolved oxygen and bacteria.

Section 6. Wastewater

Wastewater Discharges						
Outfall	Location of Outfall				Notes: Include source (where in the facility the wastewater is generated), frequency, duration & volume (cfs or gpm) of discharge)	Name of Receiving Water
		Degrees	Minutes	Seconds		
001	Latitude	47	22	10.6	Waste generated from hatchery operations is planned to be continuous at the volumes listed a	Hood Canal
	Longitude	123	09	33.4		
002	Latitude					
	Longitude					
003	Latitude					
	Longitude					
004	Latitude					
	Longitude					
005	Latitude					
	Longitude					
006	Latitude					
	Longitude					
007	Latitude					
	Longitude					
008	Latitude					
	Longitude					
009	Latitude					
	Longitude					
010	Latitude					
	Longitude					

Section 6. Wastewater (cont'd)

Indicate the type(s) of wastewater treatment provided at this facility.

In-line Settling Basin

Do any rearing units discharge through an in-line settling basin? ☐ Yes ☒ No

Describe in-line settling basin (length, volume, retention time, etc.):

Which rearing units discharge to the in-line settling basin, and when?

Off-line Settling Basin

Does the facility use an off-line settling basin? ☒ Yes ☐ No Number of off-line settling basins: 2

Which rearing units discharge to the off-line settling basin, and when/under what circumstances?

All. All round ponds discharge 15% of their total effluent into the settling basins.

Does the off-line settling basin discharge directly to surface water? ☒ Yes ☐ No

Describe: Discharge location noted above.

Basin size: 24'x8', 56" water depth

Retention time: 87 minutes ave

Water volume of off-line settling basin: 6,702 gallons

Estimate the number of discharges from the off-line settling basin per year: Continuous

How often is the off-line settling basin cleaned/excavated? As needed

If an off-line settling basin is used for cleaning wastes, is there a quiescent zone at the end of the last raceway or rearing pond in each series? ☒ Yes ☐ No

Describe: Flow characteristics of the rearing tanks allows for settling of heavy solids which discharge into the settling basin.

Is there a mechanism to block discharges of floating material? ☐ Yes ☒ No

Describe:

Does the facility discharge to the ground? ☐ Yes ☒ No

Describe:

Does the facility have unlined structures? ☐ Yes ☒ No

Material:

Quantity:

Describe:

Section 6. Wastewater (cont'd)

Construction of Off-line Settling Basin (If known)	
Liner Material	Thickness
Concrete Yes	12 Inches
Asphalt	Inches
Clay or earthen	Inches
Plastic PVC/HDPE/other Describe:	mils
Pond and Raceway Cleaning	
How frequently are the ponds and/or raceways cleaned (specify which)? Notes: All rearing vessels are cleaned daily.	
Methods of cleaning: <input type="checkbox"/> Vacuum <input checked="" type="checkbox"/> Manually <input type="checkbox"/> Other _____	
What is done with the removed solids? Solids flush to the settling basin.	
Are ponds cleaned prior to fish release? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are any liquid or solid wastes discharged to the ground? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:	
Are any wastes (other than domestic sewage) discharged to a septic system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:	
Are any solids or wastes (other than domestic waste) discharged to a publicly owned treatment works? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, name of facility: Describe waste:	
Are wastes discharged to any other waste treatment system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe:	

Section 7. Solid Waste Disposal

Describe annual quantities of solids (including fish mortalities) disposed and location of disposal.

Type of Solid Disposed	Date Disposed	Location Disposed
Adult sockeye carcasses	Fall /	Hauled off-site to landfill or used for nutrient enhancement
Rearing mortalities	continuous	Landfill
Dry solids from offline settling basin	Summer	Disposed as septage or land applied class B biosolid in accordance with WA Dept of Ecology
Notes:		

Section 8. Aquaculture Drugs and Chemicals

Please indicate which drugs or chemicals you plan to use at the facility during the next 5 years.

Plan to use in the next 5 years?	Investigational New Animal Drug (INAD)?	Drug or Chemical
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Azithromycin
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Chloramine-T
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Chlorine
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Draxxin
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Erythromycin - injectable
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Erythromycin - medicated feed
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Florfenicol (Aquaflor)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Formalin - 37% formaldehyde
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Herbicide - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Hormone - describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Hydrogen Peroxide
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Iodine
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Oxytetracycline
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Potassium Permanganate
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Romet
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	SLICE (emamectin benzoate)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sodium Chloride - salt
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Vibrio vaccine
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other: Virkon
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:

Section 9. Painted or Caulked Surfaces

Describe all painted and caulked surfaces that are in regular contact with water that is discharged to waters of the U.S.

Location of such surfaces should appear in the drawing required as part of the checklist on page 1.

Type of Paint/Caulk	Where applied (including area)	Amount applied	Date applied	Reason for application
None known				
Notes:				

Section 10. Other Information/Changes

Describe any changes to the facility or operations since the last permit application. Disregard this section if this is a new or proposed facility.

None

Section 11. Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Keith Underwood	Natural Resources Mgr.
Printed name of person signing	Title
Keith Underwood	04/18/2019
Applicant Signature	Date Signed

All permit applications must be signed as follows:

- For a corporation: by a responsible corporate officer.
- For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.
- For a municipality, state, federal, Indian tribe, or other public agency: by either a principal executive officer or ranking elected official.

Section 12. Submittal Information

Send the complete, signed information, along with required attachments, to the following address:

U.S. EPA Region 10, OWW-191
Washington Hatchery NOI
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

WAG-130026 Permit

DIRECTIONS-

CUSHMAN NO. 1 DAM AND POWERHOUSE VICINITY:

FROM TACOMA, TAKE I-5 SOUTH FOR 28 MILES. TAKE EXIT 104 TO HIGHWAY 101 NORTH. FOLLOW HIGHWAY 101 FOR 32 MILES. CUSHMAN POWERHOUSE NO. 2 WILL BE ON THE LEFT. FROM POWERHOUSE NO. 2, CONTINUE ON HIGHWAY 101 NORTH 2.7 MILES TO HOODSPORT AND TURN LEFT ONTO HIGHWAY 119 AT "CUSHMAN STAIRCASE" SIGN. FOLLOW ROAD 4.4 MILES AND TAKE A LEFT ON NORTH STANDSTILL DRIVE. CONTINUE PAST LAKE CUSHMAN FIRE DISTRICT BUILDING FOR APPROXIMATELY 600 YARDS TO DAM CONTROL BUILDING AND SWITCHYARD ENCLOSED IN FENCED AREA WITH RESTRICTED AREA SIGNS.

CUSHMAN NO. 2 DAM AND POWERHOUSE VICINITY:

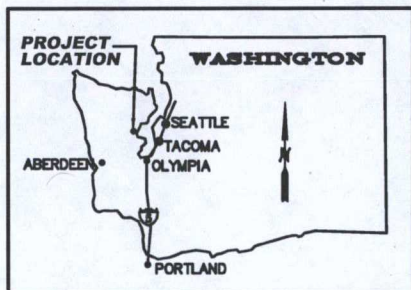
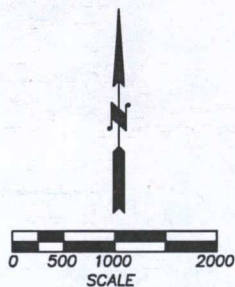
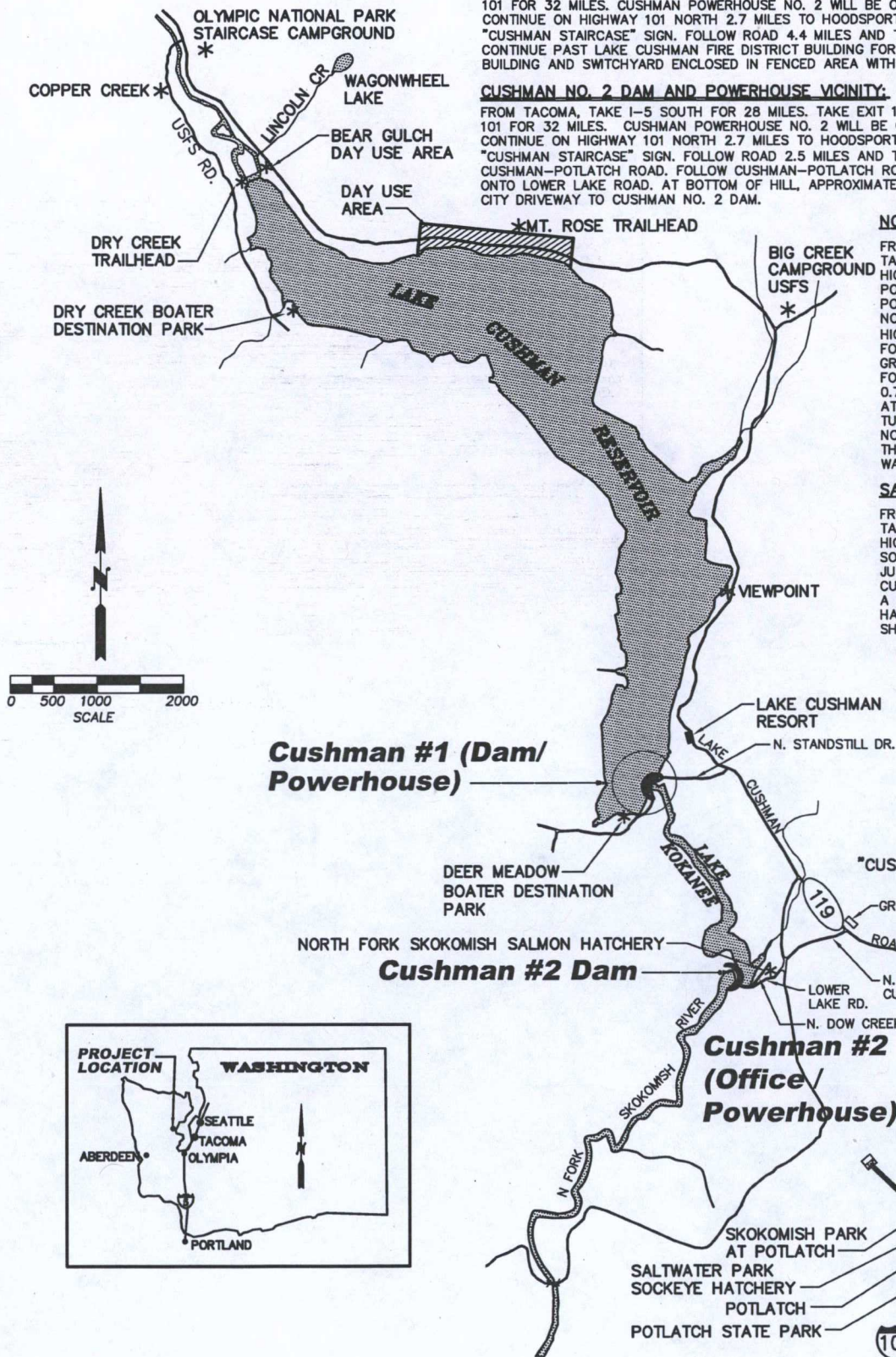
FROM TACOMA, TAKE I-5 SOUTH FOR 28 MILES. TAKE EXIT 104 TO HIGHWAY 101 NORTH. FOLLOW HIGHWAY 101 FOR 32 MILES. CUSHMAN POWERHOUSE NO. 2 WILL BE ON THE LEFT. FROM POWERHOUSE NO. 2, CONTINUE ON HIGHWAY 101 NORTH 2.7 MILES TO HOODSPORT. TURN LEFT ONTO HIGHWAY 119 AT THE "CUSHMAN STAIRCASE" SIGN. FOLLOW ROAD 2.5 MILES AND TURN LEFT AT GROCERY STORE ONTO CUSHMAN-POTLATCH ROAD. FOLLOW CUSHMAN-POTLATCH ROAD APPROXIMATELY 0.75 MILES. TURN RIGHT ONTO LOWER LAKE ROAD. AT BOTTOM OF HILL, APPROXIMATELY 0.5 MILES, TURN LEFT ONTO RESTRICTED CITY DRIVEWAY TO CUSHMAN NO. 2 DAM.

NORTH FORK SKOKOMISH SALMON HATCHERY

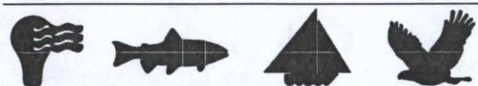
FROM TACOMA, TAKE I-5 SOUTH FOR 28 MILES. TAKE EXIT 104 TO HIGHWAY 101 NORTH. FOLLOW HIGHWAY 101 FOR 32 MILES. CUSHMAN POWERHOUSE NO. 2 WILL BE ON THE LEFT. FROM POWERHOUSE NO. 2, CONTINUE ON HIGHWAY 101 NORTH 2.7 MILES TO HOODSPORT. TURN LEFT ONTO HIGHWAY 119 AT THE "CUSHMAN STAIRCASE" SIGN. FOLLOW ROAD 2.5 MILES AND TURN LEFT AT GROCERY STORE ONTO CUSHMAN-POTLATCH ROAD. FOLLOW CUSHMAN-POTLATCH ROAD APPROXIMATELY 0.75 MILES. TURN RIGHT ONTO LOWER LAKE ROAD. AT BOTTOM OF HILL, APPROXIMATELY 0.5 MILES, TURN RIGHT ONTO NORTH DOW CREEK DRIVE AND NORTH FORK SKOKOMISH SALMON HATCHERY IS ON THE RIGHT AT 30 N. DOW CREEK DRIVE, HOODSPORT, WA 98548.

SALTWATER PARK SOCKEYE HATCHERY

FROM TACOMA, TAKE I-5 SOUTH FOR 28 MILES. TAKE EXIT 104 TO HIGHWAY 101 NORTH. FOLLOW HIGHWAY 101 FOR 32 MILES. THE SALTWATER PARK SOCKEYE HATCHERY IS LOCATED ON THE RIGHT, JUST SOUTH OF SKOKOMISH PARK AT POTLATCH. CUSHMAN POWERHOUSE NO. 2 WILL BE ON THE LEFT A SHORT DISTANCE PAST THE HATCHERY SITE. HATCHERY ADDRESS: 21462 NORTH US HIGHWAY 101, SHELTON, WA 98584.



CUSHMAN PROJECT AREA MAP



Cushman Hydro Project
T A C O M A P O W E R

Saltwater Park Hatchery Process Design Criteria

Area/System

Biological Program

Sockeye Salmon	
Adults at Spawn	2,090
Release No. 1	200,000 fish @ 2,500 fpp
Release No. 2	1,000,000 fish @ 800 fpp
Release No. 3	800,000 fish @ 150 fpp

Water Supply System

Incubation & Early Rearing	Ground Water
Flow	1,800 gpm
Adult Holding	Surface Water
Flow	2,100 gpm
Aeration	
Ground Water	48-in. Dia. Packed Column
Surface Water	48-in. Dia. Packed Column

Effluent Treatment System

Clarifiers	
Number	2
Size	8-ft x 24-ft
Cleaning	Drain and Pump
Max Flow	500 gpm

Fish Rearing Units

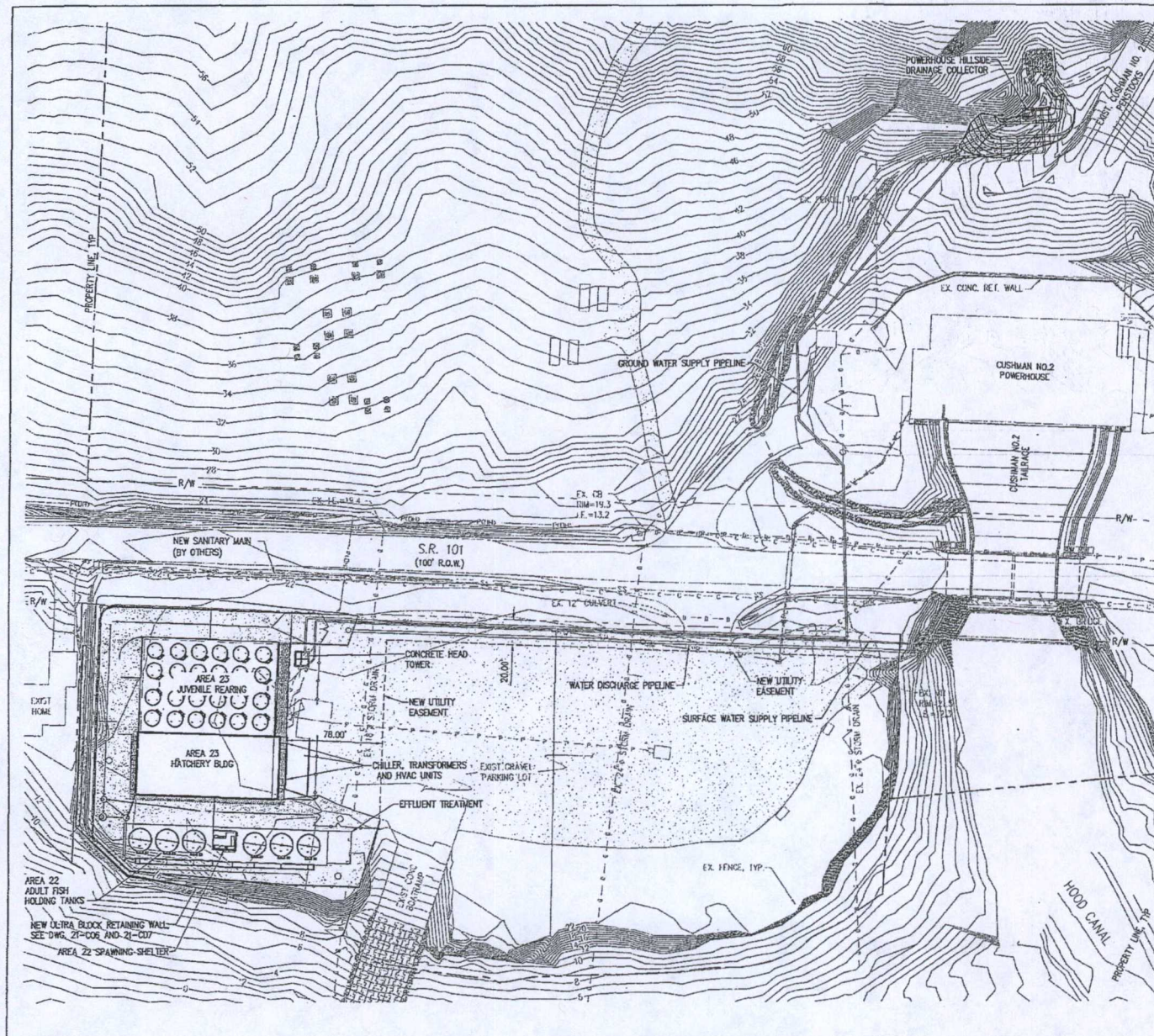
Incubation	
Number	120
Type	1ar
Flow Per Incubator	1 gpm
Otolith Marking Temperature	Ambient - 10 degrees F
Max Otolith Marking Flow	60 gpm
Adult Holding	
Number	6
Type	18-ft Dia. Cornell Circulars
Design Flow per Unit	350 gpm
Starter Troughs	
Number	24
Rectangular	2.1-ft H x 2.0-ft W x 16-ft L
Flow per Trough	20 gpm
Final Rearing	
Number	24
Type	12-ft Dia. Cornell Circulars
Flow per Unit	75 gpm

DEERE & AULT
CONSULTANTS, INC.

WARNING
IF THIS BAR DOES
NOT MEASURE 1"
THEN DRAWING IS
NOT TO SCALE

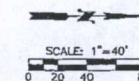


NO.	DATE	REVISION DESCRIPTION	DESIGN	CHECKED	SHIPPED
CITY OF TACOMA DEPARTMENT OF PUBLIC UTILITIES LIGHT DIVISION					
SALTWATER PARK HATCHERY PROCESS DRAWINGS PROCESS DESIGN CRITERIA					
DESIGNED	JRS		CHECKED	JRS	
APPROVED	3/10/14		DATE	AS SHOWN	
APPROVED	20-P01		SHEET	OF	



REFERENCE DRAWINGS:

- BP251 HIGHWAY BRIDGE OVER TAIL RACE
- BP452 CUSHMAN POWER PLANT NO. 2 SANITARY SYSTEM GENERAL LAYOUT
- BP501 CUSHMAN NO. 2 POWERHOUSE AREA SURFACE DRAIN
- BP2106 SALTWATER PARK RESTROOM UTILITIES SITE PLAN
- BP2107 SALTWATER PARK RESTROOM UTILITIES MISCELLANEOUS DETAIL



COMBINED GRID SCALE FACTOR = 0.99998947



VERTICAL DATUM
NAVD 83
N.G.S BENCHMARK "448 1973" = 23.27'



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE



NO.	DATE	REVISION DESCRIPTION	BY	CHECKED	DATE
CITY OF TACOMA DEPARTMENT OF PUBLIC UTILITIES LIGHT DIVISION					
SALTWATER PARK HATCHERY SITE DRAWINGS PROPOSED SITE PLAN					
DESIGNED	CPD	FIELD BOOK			
APPROVED	3/20/14	AS SHOWN			
APPROVED	3/14/14	21-C03			
APPROVED		21-C03			



- NOTES:**
1. CONCRETE THRUST BLOCKS SHALL BE PLACED ON ALL PIPE ELBOWS AS PER DETAIL J/C41.
 2. BACK FLOW PREVENTOR SHALL BE PLACED UPSTREAM OF NEW PIPE CONNECTION.
 3. STORM WATER PIPE AND CATCH BASINS ARE LOCATED ON THE PAVING AND DRAINAGE PLAN (21-C05).
 4. CONTRACTOR SHALL INSTALL PACKAGED LIFT STATION WHICH WILL BE OWNER FURNISHED EQUIPMENT.
 5. CONTRACTOR SHALL ENCASE ALL SANITARY SEWER CROSSINGS.
 6. SEE DETAIL B/C41 FOR FLOW METER VAULTS.

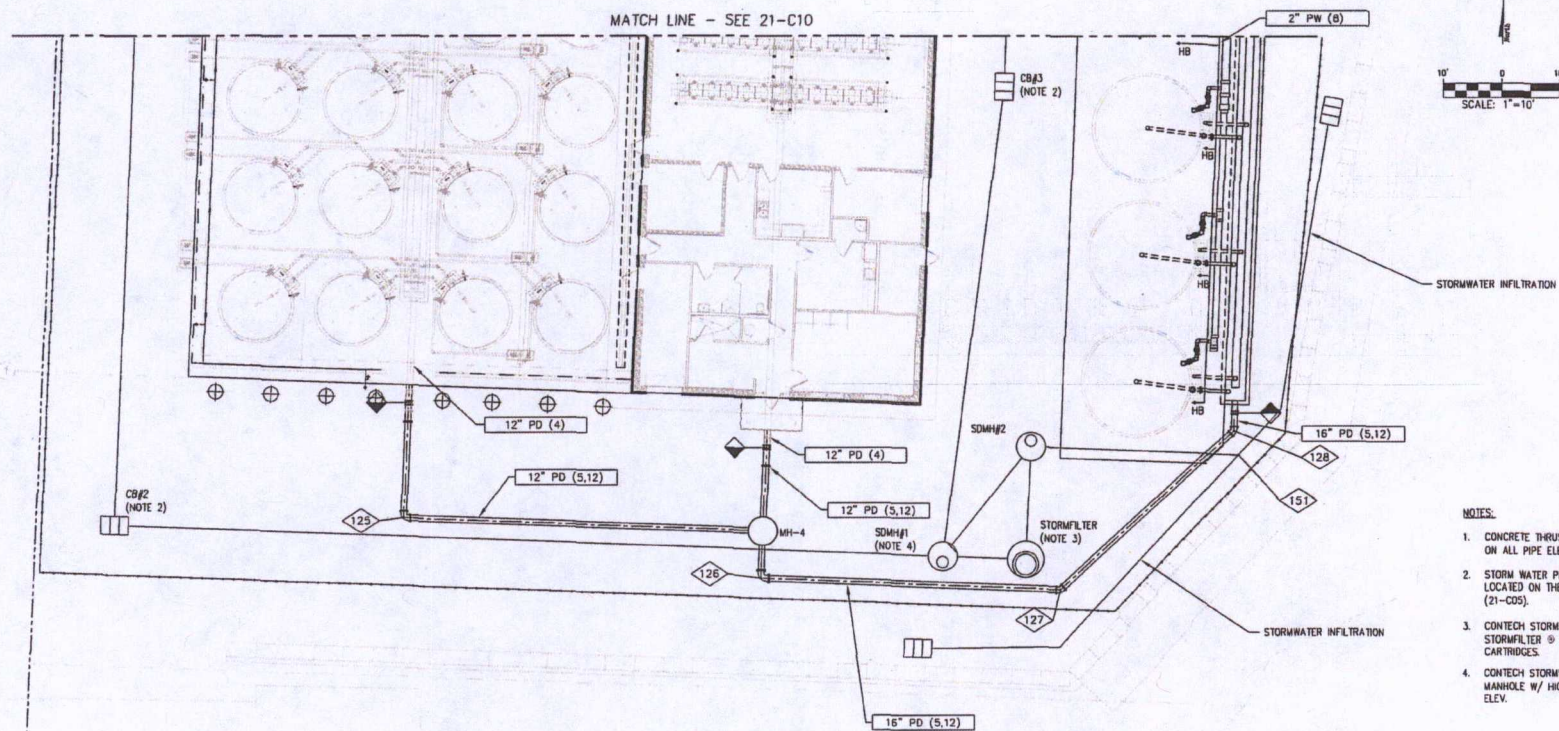
NO.	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	SIN
		CITY OF TACOMA			
		DEPARTMENT OF PUBLIC UTILITIES			
		LIGHT DIVISION			
SALTWATER PARK HATCHERY					
SITE DRAWINGS					
YARD PIPING OVERALL PLAN-I					
REVIEWED APPROVED SUPERVISOR'S SIGNATURE APPROVED			DESIGNED JRE 3/10/74 DATE AS SEEN SCALE DRAWN 21-C10		

WARNING

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IF THIS BAR DOES NOT MEASURE THEN DRAWING NOT TO SCALE

DEERE & AULT
CONSULTANTS, INC.



SITE PLAN

NOTES:

1. CONCRETE THRUST BLOCKS SHALL BE PLACED ON ALL PIPE ELBOWS AS PER DETAIL 3/C41.
2. STORM WATER PIPE AND CATCH BASINS ARE LOCATED ON THE PAVING AND DRAINAGE PLAN (21-C05).
3. CONTECH STORMWATER SOLUTIONS 72" MANHOLE STORMILIFTER @ IN 72" W/ (4) 18" ZPG CARTRIDGES.
4. CONTECH STORMWATER SOLUTIONS STORMGATE MANHOLE W/ HIGH FLOW BYPASS WEIR AT 19.06' ELEV.

NO.	DATE	REVISION DESCRIPTION	DRAWN	CHECKED	SA
CITY OF TACOMA					
DEPARTMENT OF PUBLIC UTILITIES					
LIGHT DIVISION					

SALTWATER PARK HATCHERY
SITE DRAWINGS
YARD PIPING OVERALL PLAN-I

REVISED	DESIGNED	FIELD BOOK
	JRC	
APPROVED	3/10/74	AS SHOWN
	SCE	SCALE
APPROVED	BY SUPERVISOR REQUIRED	ORIGINAL

21-C11

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